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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,709	12/17/2003	Yong-Sung Ham	0630-1835P	5806

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EXAMINER	
CHACKO DAVIS, DABORAH	

ART UNIT	PAPER NUMBER
1722	

NOTIFICATION DATE	DELIVERY MODE
05/13/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)
	10/736,709	HAM, YONG-SUNG
	Examiner	Art Unit
	DABORAH CHACKO-DAVIS	1722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 March 2011*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4,7-10 and 28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-2,4,7-10,28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)	
1) ☐ Notice of References Cited (PTO-892)	4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) ☐ Notice of Informal Patent Application
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.	6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 1, is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 1, at line 12, recites the limitation "the whole circumferential area of the printing roll". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-2, 4, 7-10, and 28, are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Patent No. 6,001,515 (Evans et al., hereinafter referred to as Evans) in view of JP 09-318805 (Kondo et al., hereinafter referred to as Kondo), and U. S. Patent No. 5,850,271 (Kim et al., hereinafter referred to as Kim).

Evans, in col 5, lines 22-30, and lines 48-67, in col 6,lines 1-4, in col 12, lines 62-67, in col 13, lines 1-10, and in figure 1B, discloses forming a resist pattern on the panel (LCD panel on the substrate i.e., the object layer is divided into plurality of divided

areas, see figure 1A) by transferring the resist material (radiation curable ink) from the grooves of the cliché (intaglio roller) onto the transfer layer (blanket), by rotating and contacting the surface of the intaglio roller (cliché) i.e., the resist in the grooves of the cliché is transferred to the whole area of the transfer layer. Evans, in col 2, lines 9-15, discloses that the LCD comprises a TFT. Evans, in col 5, lines 48-67, in col 8, lines 20-24, discloses that the transfer layer (blanket) is applied onto the collector roll (printing roll) prior to transferring the resist in the grooves (resist pattern) to the printing roll, transferring the resist pattern onto the transfer layer (blanket), and then transferring the resist pattern on the transfer layer by rolling the collector roll (printing roll), with the transfer layer and the resist pattern on the transfer layer, onto the glass substrate (etching object layer). Evans, in col 9, lines 12-17, discloses that the transfer layer improves the adhesive force with the resist (remains sticky or tacky to contact and remove the pattern from the intaglio roller) (claims 1, and 28). Evans, in col 9, lines 12-65, in col 12, lines 62-67, in col 13, lines 1-5, and in figures 4, and 5, discloses that the circumference and shape and height and size of the blanket (transfer layer) is the same as that of the collector roll's (cylindrical shape, see figures 2-5), and that the area of the blanket (transfer layer) is less than that of the etching object layer (glass substrate), and the area of the substrate is a whole multiple of the area of the blanket (claims 2, 4, 7). Evans, in col 3, lines 20-21, and lines 47-53, and in col 6, lines 6-9, discloses that the etching object layer can be a glass substrate (i.e., SiO_x) and/or that the etching object layer can be a TFT (i.e.., TFT includes at least a metal layer), and/or that the etching object layer can include an ITO layer (i.e., semiconductor layer) (claims 8-10).

The difference between the claims and Evans is that Evans does not disclose that the cliché is divided into a plurality of areas (portions) corresponding to the divided areas (plurality of divided areas) of the substrate. Evans does not disclose that each of the unit panel has the claimed gate lines or data lines defining the claimed plurality of pixels.

Kondo, in the abstract, and in paragraph nos. [0001], [0019], [0020], [0022], and in figure 2, discloses that the intaglio (cliché) is divided into a plurality of areas (lattice pattern) corresponding to that of the divided areas of the substrate (the substrate can be a LCD color filter); i.e., the pattern of the cliché (intaglio) has grooves and the claimed plurality of areas (plurality of portions), and the substrate is also a liquid crystal color filter i.e., the grooves and the areas (portions) correspond to that of the intaglio (cliché); and thus the resist in the grooves of the first divided portion of the cliché (intaglio) is applied via the printing roll onto the corresponding first area of the liquid crystal color filter substrate, and the resist in the grooves of the second divided portion of the cliché (intaglio) is applied via the printing roll onto the corresponding second area of the liquid crystal color filter substrate, and so on i.e., the applying and transferring process is repeated, also the circumferential area of the printing roll corresponds to the area of the unit panel and the area of the divided portion of the cliché.

The difference between the claims and Evans in view of Kondo is that Evans in view of Kondo does not disclose that each of the unit panel has the claimed gate lines or data lines defining the claimed plurality of pixels.

Kim, in col 1, lines 16-25, discloses that the LCD panel comprises a TFT, and has a plurality of pixels each pixel including a pixel electrode and a thin film transistor, wherein gate lines and data lines of matrix type are formed between the individual pixels.

Therefore, it would be obvious to a skilled artisan to modify Evans by employing an intaglio (cliché) as suggested by Kondo because Kondo, in [0018], and [0019], discloses that using the cliché (intaglio) that has a pattern that is the same as that of the substrate (LCD) enables the reproduction of the detailed pattern with a high degree of accuracy. It would be obvious to modify Evans in view of Kondo by employing the claimed LCD substrate as suggested by Kim because Evans in col 1, lines 22-25, and in col 2, lines 13-15, discloses that the LCD substrate is a thin film transistor LCD display panel, and therefore will have the same claimed structure.

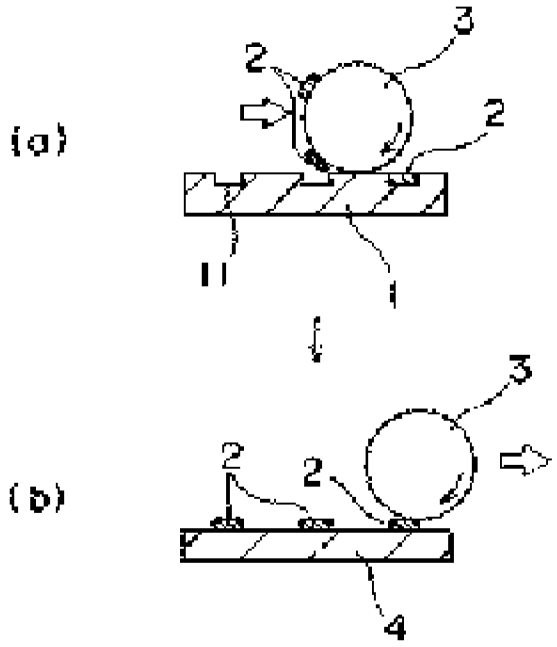
Response to Arguments

6. Applicant's Amendment, and arguments filed March 3, 2011, have been fully considered but they are not persuasive. The 35 U.S.C. 103(a) rejection made in the previous office action has been maintained.

A) Applicants argue that none of the references teach the claimed transferring, applying and repeating of the transferring and applying process as recited in claim 1.

Kim is relied upon to disclose the TFTLCD display panel with the claimed structural limitations. Evans teaches the transfer of the resist in the grooves to the etching object layer via the blanket applied on the printing roll, wherein the area of the

resist in the grooves and the area of resist transferred to the etching object layer correspond to each other. Evans, in col 10, lines 57-62, discloses that the transfer layer transfers the pattern to the substrate wherein the circumference of the transfer layer (on a printing roll) is the same as the length of the substrate to which the pattern is transferred. Evans is already relied upon to disclose the transferring of the ink pattern (ink in the grooves of the cliché) i.e., the ink in the grooves is transferred to the entire surface of the transfer layer (the claimed whole area of the blanket) i.e., to the entire surface of the printing roll, which is then applied onto the surface of the etching object layer. Kondo teaches that the printing process manufactures a liquid crystal color filter for an LCD. Kondo, in [0020], teaches that the intaglio (the claimed cliché has a pattern formed in a lattice like pattern and in figures 1-2, illustrates that the grooves and the areas correspond to that of the substrate, and is the same as that illustrated and taught by the instant specification. Additionally, If Kondo is making an LCD, wherein the intaglio has the same structure as that to be transferred to the glass substrate, the intaglio will have the same structure i.e., an LCD pattern, and would require the repeating of the applying and transferring process repeatedly to complete all the unit panels. Also, the pattern 2, transferred to the substrate is the same as the claimed invention of resist transferred to the etching object layer as illustrated in applicant's drawing in figure 4C. As illustrated below, the intaglio's plurality of areas correspond to the plurality of areas of the substrate,



[Drawing 2]It is a mimetic diagram showing the manufacturing method of the light shielding layer by intaglio offset printing.
[Description of Notations]
1 Intaglio
3 Blanket
4 Transparent substrate

Kondo is relied upon to disclose that the intaglio (the claimed cliché) has plurality of grooves and has plurality of areas and Kondo, also discloses that the substrate to which the resist is transferred to is also a liquid crystal color filter for an LCD, and the liquid crystal color filter corresponds to that of the intaglio i.e., the resist from the grooves in the first area or first portion of cliché is transferred to the corresponding first area of the liquid crystal color filter (etching object layer) via the printing roll, and similarly, the resist from the second area or second portion of the intaglio is transferred to the corresponding second area of the liquid crystal color filter (etching object layer),

and so on i.e., the circumferential area of the printing roll corresponds to the area of one unit panel and the area of the divided portions of the cliché. Furthermore, Evans, teaches manufacturing an LCD on a TFT substrate. A TFT-LCD panel inherently has, and requires (in order to be a TFT-LCD) at least the following, a glass substrate, a buffer layer, a mask or light-shielding structure, a top-gate TFT structure (gate lines), a semiconductor layer, a gate conductive structure, a gate insulating structure, a black matrix pattern etc. Evans already teaches an etching object layer, and as described above, Evans, inherently has a plurality of areas both in the intaglio and the substrate, and the claimed gate lines. Kim is relied upon to disclose the TFT- LCD device, with the claimed gate lines, pixels, pixel electrodes. As described above, Evans teaches the claimed printing process, and Kondo teaches the areas of the intaglio corresponding to the areas of the substrate. Therefore the combination of Evans in view of Kondo and Kim teaches the claimed limitations.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daborah Chacko-Davis whose telephone number is (571) 272-1380. The examiner can normally be reached on M-F 9:30 - 6:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on (571) 272-1526. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/DABORAH CHACKO-DAVIS/
Primary Examiner, Art Unit 1722

May 9, 2011.